NASA Project Management Challenge 2009

PROJECT MANAGEMENT CHALLENGE 2009

Sixth Annual NASA Project Management Seminar

ABSTRACT AND BIOGRAPHY

Broad-Based Teams, Case Study 1 – Composite Crew Module

The Composite Crew Module (CCM) Team is tasked to design, build, and test a composite structural test article similar to the CEV Orion crew module primary structure. The team is a partnership between NASA and industry and includes design, manufacturing, and tooling expertise. Partners include civil servants from ARC, DFRC, GRC, GSFC, JSC, JPL, KSC, LaRC, MSFC, Air Force Research Laboratories and contractors from Alcore, Alliant Technologies, Bally Ribbon Mills, Collier Corporation, Genesis Engineering, Janicki Industries, Lockheed Martin, and Northrop Grumman. During the project's design phase, this diverse team physically co-located every 6-8 weeks, for a week or two each time. After one year the team transitioned to operating predominantly virtually, communicating via telecons, instant messaging, desktop sharing, and internet meetings.

The CCM team is divided into disciplines of Design, Analysis, Materials, Manufacturing, Inspection, and Test. The organization structure is flat, consisting of only two tiers. The contractual relationship emphasizes collaboration and team success independent of company affiliation. The project has undergone four independent technical reviews to obtain non-advocate feedback on the concepts, design, and manufacturing approach. Full scale testing is scheduled to begin in government fiscal year 2009.

The CCM team is realizing synergies from its diverse team arrangement. The innovative solutions they are developing are valuable to the Agency today, and the experience being gained by the team's Agency participants will make them better decision-makers in the future. The professional associations being forged between participants will persist as a valuable resource for the Agency for years to come.

Michael T. Kirsch
Principal Engineer
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Mike Kirsch currently serves as a Principal Engineer in the NASA Engineering and Safety Center (NESC). In his current assignment, he is the project manager leading a broad-based team to design, build, and test a Composite Crew Module (CCM). The fast-track design and fabrication effort involves concurrent engineering between nine NASA Centers and a number of industry partners. The intent of the project is to develop an Agency-wide network of composite experts with hands-on design, build, and test experience relevant to a composite habitable spacecraft.
Mike began his career at the Johnson Space Center's White Sands Test Facility (WSTF) in 1989 while completing a B.S. degree in Mechanical Engineering from New Mexico State University. Prior to joining the NESC in 2005, he was the Deputy Manager at WSTF, responsible for planning and directing tests of spacecraft propulsion systems and related subsystems. In preparing for the Deputy Manager position, Mike managed a variety of projects across WSTF. He also served as the Contracting Officer's Technical

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Representative for the WSTF support contract which culminated in the implementation of project management tools and processes. Prior to this task, Mike participated in a rotational assignment within the Space Shuttle Program's (SSP) Vehicle Engineering Office at Johnson Space Center where he was the Technical Assistant to the SSP Manager.